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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/873,367B

DATE: 03/05/2003

TIME: 12:07:50

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03052003\I873367B.raw

3 <110> APPLICANT: Young, Paul  
 4 Soppet, Daniel  
 5 Endress, Gregory  
 6 Augustus, Meena  
 7 Ebner, Reinhard  
 8 Carter, Kenneth  
 10 <120> TITLE OF INVENTION: Cancer Gene Determination and Therapeutic Screening Using  
 Signature Gene  
 11 Sets  
 13 <130> FILE REFERENCE: 689290-64  
 15 <140> CURRENT APPLICATION NUMBER: US/09/873,367B  
 15 <141> CURRENT FILING DATE: 2001-06-05  
 15 <150> PRIOR APPLICATION NUMBER: U.S. 60/236,891  
 16 <151> PRIOR FILING DATE: 2000-09-29  
 18 <150> PRIOR APPLICATION NUMBER: U.S. 60/236,842  
 19 <151> PRIOR FILING DATE: 2000-09-29  
 21 <150> PRIOR APPLICATION NUMBER: U.S. 60/244,867  
 22 <151> PRIOR FILING DATE: 2000-11-01  
 24 <150> PRIOR APPLICATION NUMBER: U.S. 60/245,084  
 25 <151> PRIOR FILING DATE: 2000-11-01  
 27 <160> NUMBER OF SEQ ID NOS: 1067  
 29 <170> SOFTWARE: PatentIn version 3.0

Does Not Comply  
 Corrected Diskette Needed  
 pp 1-25-8,10-16

## ERRORED SEQUENCES

11209 <210> SEQ ID NO: 159  
 11210 <211> LENGTH: 2520 25/0 *See p. 2*  
 11211 <212> TYPE: DNA  
 11212 <213> ORGANISM: Homo sapiens  
 11214 <400> SEQUENCE: 159  
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 11219 cggtgcttgg caagggggcc tggaccggaa gacggaggac ttagtagtcg gggcgggggg 180  
 11221 ggggggggac aacagtctag aaatgcgcag acatggaatt agggtcacga gtttcgtttg 240  
 11223 ggtcatgttc agatggagag gctgtggat gcctttagca acctagacca cttgcattgc 300  
 11225 agccgagcta gcagcagctg gtgccccgccc aggccccgctg taccttccca gggctttgga 360  
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 11229 ccgatccgc tccttgcacc tcatcaggc aaggggcagg ctcggctgg ggagccggcg 480  
 11231 cgggcacggc ggcagccgc cgagggggac gcagggcactg tcgccccgccc cccggccccc 540  
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 11235 caggccttgg cggcggcggc gccggccgg gacccgaggg cggggacttc ctggcccgt 660  
 11237 accggcttgt atcgaacaag ctgaagaagc gttcctgcg gaagccgaac gtggcggagg 720  
 11239 ccggcgagca gttcggacag ctggccggg agctgcgcg ccaggagtgt ctgccctacg 780

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| 11243      | aggcgctggc  | cctcaccgag   | gccgcccgc    | tcttcctgcg  | gcaggagcgc  | gacgcgcccag  | 900        |
| 11245      | cgctggctcg  | ccccggccgc   | tacggggagc   | cgctgcaggc  | cgccggccagc | gccctggcg    | 960        |
| 11247      | ccgcgggtcg  | tctgcaccc    | gagctggcc    | agccggccgc  | cgccggccgc  | ctctgcctcg   | 1020       |
| 11249      | agctggccgc  | cgcccgtcgc   | gacctggcc    | agccggccgc  | cgccggccgt  | cacttccagc   | 1080       |
| 11251      | gcgcggccca  | gctccagctg   | ccccagctgc   | ccctggccgc  | gctgcaggc   | cttggcgagg   | 1140       |
| 11253      | ccgcctcc    | ccagctgctg   | ggcgcgcact   | acaccggcgc  | cctggcggtc  | ttcacgcgca   | 1200       |
| 11255      | tgcagcgcct  | ggcgcgggag   | cacggcagcc   | acccgggtca  | gtcaactgccc | ccggcccccgc  | 1260       |
| 11257      | cgccggcacc  | ccagcccccgg  | cccgggcgca   | cgcccgccct  | accggccgcg  | ctgtttcc     | 1320       |
| 11259      | cgactccgg   | ctcgccggcg   | ccctctcccg   | cgccctgggc  | gccttctcg   | acgtactgtt   | 1380       |
| E--> 11260 | gtgtcccgcg  | tgctgctgct   | gctccctctg   | caaccaccgc  | ccgcaagct   | 1440         | 1430 shown |
| E--> 11262 | gctccggag   | cacgcccaga   | ccctggagaa   | gtactcctgg  | gagggttttgc | acagccacgg   | 1500       |
| E--> 11264 | gcaggagagc  | agcggccagc   | ttcccgagga   | gcttttctg   | ctgctccagt  | ctttggctat   | 1560       |
| E--> 11266 | ggctaccac   | aaaaaggaca   | cggaagccat   | caagtcgtc   | cagggtggaga | tgtggccact   | 1620       |
| E--> 11268 | tttgactgt   | gagcagaacc   | accccttca    | cctcggtctg  | caagaaacca  | tctccccata   | 1680       |
| E--> 11270 | ggacaggagg  | tctgatccat   | cccattcacc   | cagtgacttc  | ttttgccc    | ggcctggact   | 1740       |
| E--> 11272 | ttttgcata   | gtcacgtta    | ccagatgact   | ttgcctgtta  | ccaaacctca  | tgcacccacg   | 1800       |
| E--> 11274 | tttgcgtctg  | gggaggaata   | aaaagacatc   | gttccgctt   | ctgcgttttgc | ttattccat    | 1860       |
| E--> 11276 | tgccgcata   | ggaattattt   | cgttggctga   | acgttaccag  | cacccggaga  | acacattttg   | 1920       |
| E--> 11278 | atagaatcag  | agttagaggac  | atggctgtct   | tctaaaaagc  | cacgacatga  | aatgacaat    | 1980       |
| E--> 11280 | ccctttcg    | tccttcctcc   | gctgcttca    | cctaacgcag  | cctcgtcct   | ccgcctttgt   | 2040       |
| E--> 11282 | ttcatagtga  | ggattttattt  | ttgcacggcg   | ccctccctct  | aaataccat   | cttagatgat   | 2100       |
| E--> 11284 | ttcatccgtc  | ccctcacttc   | ttaacatatt   | cctgtgtctt  | tgtaatggcc  | aaatttctcc   | 2160       |
| E--> 11286 | ttccactcg   | ccgcacggta   | cgtcttcat    | ggagtcattt  | tattcctac   | agcttccttg   | 2220       |
| E--> 11288 | taaccacagc  | cctaaatcca   | tgataaaagct  | actcttgcac  | tcttactca   | tgtgtgggtt   | 2280       |
| E--> 11290 | ttgtgtccgt  | cgctctataaaa | atgtgactct   | tttacctact  | tgtcaggagg  | ccagcagcag   | 2340       |
| E--> 11292 | aaccagatag  | ctgtttggc    | tccaggatgt   | attcgttcc   | ttgaaatttgc | cgctatgcct   | 2400       |
| E--> 11294 | cctatgtgg   | caacgaacct   | gcagagatca   | tctatgtat   | cctccgtact  | cggtgtactg   | 2460       |
| E--> 11296 | caatgcagat  | acatccagtg   | cagcgggtct   | ggtgcgcgt   | catcgatttgc | cattgaattc   | 2520       |
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| 14585      | <211>       | LENGTH:      | 14770        | 14760       |             |              |            |
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| 14587      | <213>       | ORGANISM:    | Homo sapiens |             |             |              |            |
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| 14592      | tatcttcctg  | cttcttagtca  | aagctttctc   | tctagtgtatt | ggaatgtgc   | tgttaagccta  | 120        |
| 14594      | tttagagggtc | ctgaggatata  | cacctttac    | aaggaagccg  | tgtgtgttgc  | agaggatctt   | 180        |
| 14596      | tttaaaatgca | ttatggctca   | tgcagcctca   | caattaaaga  | aaaacaggga  | tttagaaatc   | 240        |
| 14598      | aatgctgaag  | aagagcctga   | gaaaaaaaaa   | aaacaccgc   | aacgggtcccg | ggatcgaaag   | 300        |
| 14600      | aaaaagtctg  | atgccaatgc   | aagttactta   | agagcagctc  | gagctggaca  | ccttggaaag   | 360        |
| 14602      | gccctcgact  | acataaaaaaa  | tggagttgac   | atcaacattt  | gcaatcagaa  | ttgggttgaac  | 420        |
| 14604      | gctctccacc  | ttgttccaa    | agaaggccat   | gtagaggttg  | tttctgagct  | gctgcagaga   | 480        |
| 14606      | gaagccaaatg | ttgatgcagc   | tacaaagaaa   | gaaaaacacag | cattgcacat  | cgcacatcttgc | 540        |
| 14608      | gctggcaag   | cagaggtggt   | aaaagtcttgc  | tttacaaatg  | gagccaaatgt | caatgcacaa   | 600        |
| 14610      | tctcagaatg  | gttcaacgccc  | attgtatatg   | gcagcccagg  | aaaatcacct  | ggaagttgtc   | 660        |
| 14612      | aagtttcttc  | ttgacaatgg   | tgcaagccag   | agcctagcc   | cagaggatgg  | tttcacacca   | 720        |
| 14614      | ttggcagtgg  | cttgcaca     | aggtcacgc    | caagtgcgtt  | cgctccgtct  | agagaatgac   | 780        |
| 14616      | accaaaggaa  | aagtgcgtct   | cccagctt     | catatcgcgg  | ccgcacaaaga | cgacacacaaa  | 840        |
| 14618      | ggccgcgccc  | tgctgctgca   | gaatgacaac   | aatgcagatg  | ttgaaatcaaa | gagtggcttc   | 900        |

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| 14620 | actccgtctcc | acatagctgc  | tcactatgga | aatatcaatg | tagccacgtt | gctgttaaac  | 960   |      |      |
| 14622 | cgagcggctg  | ctgtggattt  | caccgcaagg | aatgacatca | ctccttaca  | tggtgcata   | 1020  |      |      |
| 14624 | aaaagaggaa  | atgcaaata   | gttaaaacta | ttgctcgatc | gaggagctaa | aatcgatgcc  | 1080  |      |      |
| 14626 | aaaaccaggg  | atggctgac   | accactgcac | tgtggagcaa | ggagtgccca | cgagcagg    | 1140  |      |      |
| 14628 | gtagaaatgt  | tgcttgcata  | agctgc     | cccccc     | attcttcaa  | aaaccoaagaa | 1200  |      |      |
| 14630 | ccattgcaca  | tggccacaca  | aggggatcat | ttaaactg   | cg         | tccagttct   | 1260  |      |      |
| 14632 | aatgtacccg  | tggatgatgt  | caccaatgac | tac        | ctgact     | ccctacacgt  | 1320  |      |      |
| 14634 | tgtggccatt  | acaaaagtgc  | caaggttctc | ttggataaga | aagctaacc  | caatgc      | 1380  |      |      |
| 14636 | gcctcgaatg  | gcttacccc   | tcttcata   | tc         | gc         | ctgc        | 1440  |      |      |
| 14638 | gaactcc     | tgaaaacacgg | tgc        | atccatc    | caagctgtaa | ccgagtc     | 1500  |      |      |
| 14640 | atccatgtt   | ctgc        | ttcat      | ggggcatgt  | aatattgtat | cacaacta    | 1560  |      |      |
| 14642 | gcctcacc    | acac        | accac      | tgtgagag   | gaaaac     | tg          | ca    | 1620 |      |
| 14644 | ggccaa      | gctg        | aaatgt     | gtatctgg   | caagacgg   | ctc         | ag    | 1680 |      |
| 14646 | aaggatgacc  | aaacacc     | act        | ccacatt    | ca         | cccc        | actgg | 1740 |      |
| 14648 | cagctgt     | gc          | agaagg     | atctccaa   | at         | gccc        | actt  | 1800 |      |
| 14650 | cac         | tttcc       | cccg       | gagagg     | g          | catgg       | ccgt  | 1860 |      |
| 14652 | tctt        | atcta       | taaca      | acaaa      | gaaagg     | at          | ctt   | at   | 1920 |
| 14654 | aagctt      | gaag        | tcg        | ccaaat     | cct        | ccat        | gc    | tg   | 1980 |
| 14656 | agcgg       | gctaa       | cacc       | actg       | ca         | tta         | ccat  | gt   | 2040 |
| 14658 | cttt        | ggacc       | aagg       | gac        | cc         | atgg        | tata  | cc   | 2100 |
| 14660 | atcg        | ctg         | ccca       | aaa        | aga        | atcg        | act   | tc   | 2160 |
| 14662 | gcca        | ac          | cc         | ttac       | cc         | att         | gt    | tc   | 2220 |
| 14664 | gtgg        | acat        | gg         | tgt        | cg         | tt          | at    | gg   | 2280 |
| 14666 | ggc         | ctg         | accc       | cact       | cc         | atgt        | gg    | ca   | 2340 |
| 14668 | gt          | aaa         | cca        | gg         | gt         | cc          | aa    | at   | 2400 |
| 14670 | gg          | ctg         | ccact      | atg        | aaat       | at          | tt    | gg   | 2460 |
| 14672 | aat         | gcca        | aaa        | caa        | aaat       | gg          | t     | at   | 2520 |
| 14674 | catata      | ataa        | atg        | tctt       | act        | t           | c     | ta   | 2580 |
| 14676 | aata        | actg        | ccc        | ttgg       | catt       | gc          | cc    | tt   | 2640 |
| 14678 | atag        | tgac        | cc         | aaga       | accat      | gacc        | ac    | at   | 2700 |
| 14680 | cc          | agaa        | acg        | tga        | atg        | aaat        | gt    | tt   | 2760 |
| 14682 | cct         | gaa         | at         | tc         | atg        | atg         | tt    | gg   | 2820 |
| 14684 | acc         | ggg         | gaca       | caga       | aaata      | tctt        | gg    | gg   | 2880 |
| 14686 | ctg         | cct         | gc         | agg        | tt         | at          | gg    | cc   | 2940 |
| 14688 | ttc         | ag          | ttc        | gg         | at         | gg          | ct    | cc   | 3000 |
| 14690 | at          | tgaa        | aa         | ac         | tc         | cc          | aa    | at   | 3060 |
| 14692 | tc          | agat        | tct        | tta        | ca         | g           | ac    | cc   | 3120 |
| 14694 | tca         | agg         | ccc        | ttc        | att        | ctt         | gg    | cc   | 3180 |
| 14696 | at          | gag         | agg        | aa         | cc         | gt          | cc    | gg   | 3240 |
| 14698 | ccc         | act         | cg         | aa         | t          | gg          | cc    | aa   | 3300 |
| 14700 | gg          | tga         | aa         | agg        | at         | gg          | tc    | ct   | 3360 |
| 14702 | tt          | agg         | cc         | ct         | gt         | aa          | at    | tt   | 3420 |
| 14704 | tc          | catt        | gtt        | tc         | at         | gg          | at    | tt   | 3480 |
| 14706 | aat         | ga          | ag         | tt         | at         | gg          | at    | tt   | 3540 |
| 14708 | tt          | agg         | gg         | aa         | at         | gg          | at    | tt   | 3600 |
| 14710 | gtt         | cc          | gg         | tta        | ac         | gg          | at    | tct  | 3660 |
| 14712 | acc         | ac          | gt         | tc         | at         | gg          | gg    | tc   | 3720 |
| 14714 | gt          | gg          | cc         | tcc        | ca         | gg          | at    | tt   | 3780 |
| 14716 | gca         | act         | ttt        | ta         | cc         | aa          | tt    | cc   | 3840 |

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| 14720 | gacactacac   | ccaatctgcg   | tcttctctgt  | agcattacag  | ggggcacttc | gcctgctcag  | 3960 |
| 14722 | tgggaagaca   | tcacaggaac   | aactcccttg  | acgtttataaa | aagattgtgt | ctcctttaca  | 4020 |
| 14724 | accaatgttt   | cagccagatt   | ttggcttgca  | gactgccatc  | aagttttaga | aactgtgggg  | 4080 |
| 14726 | ttagccacgc   | aactgtacag   | agaattgata  | tgtgttccat  | atatggccaa | gtttgttgtt  | 4140 |
| 14728 | tttgc当地      | tgaatgatcc   | cgtagaatct  | tccttgc当地   | gtttctgcat | gacagatgac  | 4200 |
| 14730 | aaagtggaca   | aaactttaga   | gcaacaagag  | aattttgagg  | aagtgc当地   | aagcaaagat  | 4260 |
| 14732 | attgagggtt   | tggaaggaaa   | acctatttt   | gttgattgtt  | atggaaattt | ggccccactt  | 4320 |
| 14734 | accaaaggag   | gacagcaact   | tgttttaac   | tttatttctt  | tcaaagaaaa | tagactgcca  | 4380 |
| 14736 | tttccatca    | agatttagaga  | caccagccaa  | gagccctgtg  | gtcgctgtc  | tttctgaaa   | 4440 |
| 14738 | gaacgaaaga   | caacaaaagg   | actgc当地     | acagcggtt   | gcaacttaaa | tatcactctg  | 4500 |
| 14740 | ccagcacata   | aaaaggagac   | agagtcatg   | caagatgatg  | agattgagaa | aacagataga  | 4560 |
| 14742 | cgacagagct   | tcgc当地       | agcttacgt   | aagcgctaca  | gctacttgac | tgaggctgga  | 4620 |
| 14744 | atgattgaac   | ggagtacagg   | agcaacaaga  | tccctcccc   | ccacttactc | atacaagcca  | 4680 |
| 14746 | ttctttctca   | caagaccata   | ccagtc当地    | acaacagctc  | cgattacagt | gctgggcca   | 4740 |
| 14748 | gccaagtc当地   | gcttc当地      | cttatacgt   | tcttc当地     | atacgc当地   | agcttctcg   | 4800 |
| 14750 | ttaaaatcaa   | tatggctgt    | ttcgacacct  | tctcaatca   | aatccacatt | aggcgctc当地  | 4860 |
| 14752 | actacatctt   | cagttaaatc   | cattagtgac  | gtggcatctc  | caattagatc | cttacggaca  | 4920 |
| 14754 | atgtcttc当地   | cgataaaaac   | tgtgggtc当地  | caatctccat  | acaatatacc | gtttctct    | 4980 |
| 14756 | gttaccctgg   | ctagagctcc   | agcagtc当地   | gaagctacgc  | ccttaaaagg | gctggcatcc  | 5040 |
| 14758 | aattctacgt   | tttc当地       | aacctctcca  | gtgactacag  | cagggtctct | tttggagagg  | 5100 |
| 14760 | tcatcaatta   | ctatgacacc   | ccctgc当地    | cccaaatacc  | acattaat   | gtattc当地    | 5160 |
| 14762 | agtttgc当地    | ttaagtcaat   | tattacatca  | gcagcaccgc  | taatatctc  | acctttaaaag | 5220 |
| 14764 | tcagtgggt    | ctccagttaa   | atcacgagtt  | gatgtc当地    | catcgc当地   | aattacaatg  | 5280 |
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| 14768 | aatggatcta   | tttccc当地     | aaaatatgca  | tcatc当地     | ctttaattaa | tggatgcaaa  | 5400 |
| 14770 | gccactgcca   | cgttacagga   | aaaaatttct  | tctgctaca   | actctgtgag | ctctgtggc   | 5460 |
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| 14774 | ccactcagg    | catatgttc    | tgc当地       | tcaat       | tttctcaag  | aactc当地     | 5580 |
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| 14778 | tcatcaatta   | taacagtgc当地  | agtatactct  | gtagtcaat   | ttttgccc当地 | accagcatta  | 5700 |
| 14780 | aagaaacttc当地 | cagactctaa   | ttcatttaca  | aaatcagc当地  | cagc当地     | gtcacc      | 5760 |
| 14782 | aaaacattga   | ctacggagac   | acatc当地     | cctcacttca  | gtc当地      | acttccagg   | 5820 |
| 14784 | aagtcatctt   | ttgtc当地      | accctctgc当地 | cttaagttgt  | ctacacc    | tttcttat    | 5880 |
| 14786 | tccagtc当地    | agatactaaa   | agatgttag   | gaaatgaaag  | aggac      | ctggatgacc  | 5940 |
| 14788 | gcaataactac  | agacagatgt   | gcctgaggag  | aagccattcc  | aacctgaa   | cccaaaggaa  | 6000 |
| 14790 | gggagaatag   | atgatgaaag   | accttccaaa  | attgttag    | gaga       | agacttagt   | 6060 |
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| 14796 | atccgggaag   | ccagacaaca   | agctgtgc当地  | agccag      | tctc当地     | catctgtcc当地 | 6240 |
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| 14800 | ctaacaatg    | atattggag    | tagtgc当地    | acaaactt    | aaataca    | tgaggatgca  | 6360 |
| 14802 | aagaaggatg   | gtgagggagg   | acagaaaaga  | gtttaaaac   | cagcaat    | tttgc当地     | 6420 |
| 14804 | cacaaactca   | aaatgc当地     | agcctccat   | aggacttcc   | cctctgagaa | agaattgtgt  | 6480 |
| 14806 | aaaatgc当地    | attc当地       | tggaaacagat | actat       | ttttag     | agtctc当地    | 6540 |
| 14808 | caacacgacc   | aagataaaag   | ttccctgtct  | gacagtg     | ggctt      | ttgaaacaag  | 6600 |
| 14810 | acaccttc当地   | ccccaca      | aaac        | actgg       | ctctt      | tcatgaa     | 6660 |
| 14812 | cccatcc当地    | ctgttattac   | agaaacaaga  | actgaa      | gtt        | ttttagt     | 6720 |
| 14814 | gatccctc当地   | ctgggatgt    | tccc当地      | caacc       | aggagg     | acttac      | 6780 |

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14818 aaagcattc aaatgaaagc cagtagtcaa gaagatgacc acaatcggtt tttaagcaaa 6900  
14820 ggcattcggt taaaagaaga gactcacata accacaacca ccagaatggttt ttatcattct 6960  
14822 ccaccaggcg gtgaagggtc atctgaaaga attgaagaaa ccatgtcaat ccatgacatc 7020  
14824 atgaaggcct ttcagtcggc gcggtatcct tccaaagaac tggcagggtct gttgaacat 7080  
14826 aagtccggcgt tgcgtccaga tggtcacaag tctgtctgtt aaacccatc ccagcatgca 7140  
14828 gagaaggaca accaaatgaa accccaaactg gagcgtataa tagaagtccaa catcgaaaaa 7200  
14830 ggttaaccaag ctgagccac tgaagtctt attagagaaa cccaaaagca tccagaaaaa 7260  
14832 gaaatgtatg tataatcgaa agacttatcc cggggagata ttaacccatc agatttctg 7320  
14834 ccagaaaaac acgtatcctt tccttgcgttca gagaaacagg gtcagcaaga agaagaagaa 7380  
14836 cttactgtgt aagagtctt gccttcttatt ctggagtctt ccagagtaaa cactcctgtg 7440  
14838 tcccaagaag aagatagccg cccttagttct gctcaactca tatctgtatgaa ctcttataaa 7500  
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14846 gggctgtata agcggtccag agaaaaaaata gcaactgccc cccaaaaaaa aattctctcc 7740  
14848 aaaatctata aagatgtttc tgaaaatggt ttaggtaaag tgcgtaaaga tgacatttt 7800  
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14860 acagaactgc tggcatccaa tgatgagtgg gttaaaggca gacagcatgg ccctgatgg 8160  
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14880 ataacctcag atttagcaac taggggacca tgggacaaaaa aggtcttttag aacatgggg 8760  
14882 agttcgggag ccactaacaatc taagtctcag aaagaaaaac tttcgatgtt acttggatcat 8820  
14884 gatgtaaagag agaatcacat tggtcaccctt gagagtttttca gttttgatca aagaatgaa 8880  
14886 ttatgtctg tgactgagag agaacgaaaaa ttgttaacaa acggctctt ctcagaaattt 8940  
14888 aaagaaaatgttca ctgtaaaatc tccctccaaa aaagtctt atagggataa tggtgtgaaa 9000  
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14892 gtgtcacaca ttccgtcgttca agttgcttgcat gagaggagaa tgctgtcttca taatattcc 9120  
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9180 9/70

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--> 14915 cccagcccaa ttcccgggt ttctgaggag tcagaggagg aggaacaggc caagtcaacc 9840  
E--> 14917 tcccttaagc agactacagt ggagaaaaca gcagttgagc gtgaaatgcc taatgacgtg 9900  
E--> 14919 agcaaagact ctaaccaaag accaaaaat aacagagttt ccttatattga atttccccct 9960  
E--> 14921 cctccaccac tggatgcggc ccagatttag tcagataaga agcatcatta tctcccgaa 10020  
E--> 14923 aaagagggtt acatgattga agtcaatctg caagatgagc atgacaagta ccagctggct 10080  
E--> 14925 gaacctgtca ttagagtgc gccacccctca ccagttcctc cggggccaga cgtcagtgat 10140  
E--> 14927 tcaagcgatg acgaatctat ttatcagcca gtcccaggta aaaaatatac ctccaaattta 10200  
E--> 14929 aaggaaagtgg acgatgaaca aaaagaaaaa cccaaagctt ctgctaaaa ggcttccaaac 10260  
E--> 14931 cagaaagaac tggaaagtaa tggatctggaa aagataatg aatttggct tggcccttgat 10320  
E--> 14933 tcacctcaga atgaaattgc ccagaatggg aacaacgacc agtccatcac agagtgttcc 10380  
E--> 14935 attgccacca cagcagagtt ttctcatgac acggatgcca cagagatcga ctctctggat 10440  
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E--> 14965 tccagtagt gctccctggaa gaaatcaga gcagccacta acacctctaa agttggcccc 11340  
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| E--> 33246 | ccgaggcgaa       | gcccgtggac   | aaagtgaagc | tgatcaagga  | aatcaagaac  | tacatccaag  | 600  |
| E--> 33248 | gcatcaacct       | cgtccaggca   | aagaagctgg | tggagtcct   | gccccaggaa  | atcaaagcca  | 660  |
| E--> 33250 | atgtcgccaa       | agctgaggcg   | gagaagatca | aggcggccct  | ggaggcggtg  | ggcgccaccc  | 720  |
| E--> 33252 | tggttctgga       | gtagcctcca   | gtcgaggaga | cttgcgttca  | ggggtcctgg  | gccccggcga  | 780  |
| E--> 33254 | gttcccgccc       | tcccgtggtc   | actggctccg | cccccagcac  | caggcgccca  | gtggagccgt  | 840  |
| E--> 33256 | ttgggagaat       | tgctcgcc     | acgcagcggg | ccggacagggc | cgcacagacc  | tactgtggcg  | 900  |
| E--> 33258 | ggagggaggg       | gcccgtctg    | cctggtgacg | gcacccggaa  | gcccaccagg  | acgcgccacc  | 960  |
| E--> 33260 | ggtcaatgtg       | cctctgggtgg  | ctgctgagaa | aaatacactg  | tgcagctc    |             | 1008 |
| 33811      | <210> SEQ ID NO: | 320          |            |             |             |             |      |
| 33812      | <211> LENGTH:    | 6492         | 6482       |             |             |             |      |
| 33813      | <212> TYPE:      | DNA          |            |             |             |             |      |
| 33814      | <213> ORGANISM:  | Homo sapiens |            |             |             |             |      |
| 33816      | <400> SEQUENCE:  | 320          |            |             |             |             |      |
| 33817      | gaattcaagt       | cttggccctg   | cacattccac | cctggagaaa  | tctggggcaa  | gtgactgttc  | 60   |
| 33819      | cccgccctt        | agcttctct    | gtcactggga | catcacaaca  | gcacccatct  | tagggcaact  | 120  |
| 33821      | caggccagg        | aagtgggtgc   | tgcctcacct | cccaatgtgc  | gtccctctgg  | gcctggagcc  | 180  |
| 33823      | tcagggcctc       | tggaggagg    | aagtgcgc   | ctctggcag   | gattcctggg  | aggcctggga  | 240  |
| 33825      | gagcaaggga       | agcgcacaa    | gctgagcaga | gttctggac   | tatccatgg   | ccctttctct  | 300  |
| 33827      | ctcacccccc       | aggaggtggg   | ccccctccac | ccccagcact  | tcccacctgg  | tgggtcccga  | 360  |
| 33829      | acggccccc        | cccgaggag    | gtggagcgc  | agaaaaggtg  | ggctggggcc  | ctgggtgggg  | 420  |
| 33831      | aaccttagcc       | gtgcacagag   | ttccatatgt | tctggaaaccc | ttgactccta  | gagttcagaa  | 480  |
| 33833      | cccgccac         | ttgcagttt    | cagaatgttc | aagaaacttc  | tgacactcag  | agttgcagaa  | 540  |
| 33835      | cctcctggtc       | cctgcagatt   | cctggaaatc | agaatatggt  | ggttggaaaga | atcttgcgtgc | 600  |
| 33837      | tggcgtgg         | ggtcacgccc   | tgtatccca  | gcactctggg  | aggccgaggc  | gggcagatcg  | 660  |
| 33839      | cctgaggc         | ggagttttag   | accagcctgg | ccaaacatggc | gaaatccgt   | ctctactgaa  | 720  |
| 33841      | gataacaaaa       | attagccgt    | catggtggcg | cccggtcctg  | taatcccac   | tcggcaggcc  | 780  |
| 33843      | gaggcaggag       | aatcgcttga   | acccgggagg | cagagggtgc  | agtggccaa   | gatcgagcc   | 840  |
| 33845      | ctgcactcca       | gcctgggtga   | cagagtctca | aaaaaaaaaa  | aagaaaagaa  | agaatcttgg  | 900  |
| 33847      | gcattttgt        | attcggtgtt   | cctgacagtt | tagtgactgg  | gatctcgat   | cctgatctct  | 960  |
| 33849      | ccctgtcgct       | gcctggccct   | ccattcccc  | tacttcacc   | cagccccc    | tttggttccc  | 1020 |
| 33851      | taggggagga       | aggctgggt    | gagtattagg | agccagccac  | cctggagacc  | tctgagagag  | 1080 |
| 33853      | aggacggagg       | tcgctggccc   | cttcgtggc  | cattcttagg  | acccttattg  | acggcagctc  | 1140 |
| 33855      | tctcgccccc       | ccccacaggc   | agcagcccg  | cccggtcgag  | cacatagac   | gccgggtctc  | 1200 |
| 33857      | caatgcagg        | gtatgcgt     | tagtttccgg | agttggagg   | gggcctccct  | ggaggaagtg  | 1260 |
| 33859      | gccagccagc       | tggacagtga   | agaatgaggc | tttctctct   | cagtcctccc  | cttttctgtg  | 1320 |
| 33861      | tttgcgttgc       | gaggcccacc   | tgctcccccc | gttgggggtc  | caccccccacc | accaggac    | 1380 |
| 33863      | ccccctcc         | caggcccc     | ccacccccc  | ggtttcccc   | tttcggggtc  | ccagctgcag  | 1440 |
| 33865      | cgcacggagc       | agggggagga   | ccacccctg  | cacccctct   | ccggcagca   | cagggccctg  | 1500 |
| 33867      | gtgggtgggg       | agctggggcc   | ccaggcctgg | cgcagctat   | tgctggagcc  | aaactcagga  | 1560 |
| 33869      | aagtcaacaa       | ggtgaggggc   | cgggagagg  | ggcagggggg  | caacagggt   | tttatgggg   | 1620 |
| 33871      | atgaggccag       | ggctgcccgc   | ggtgtcattt | ggctggaaagg | ccaaaaggcc  | tgccccctaaa | 1680 |
| 33873      | gttcctggcc       | cttttaaatt   | tctccagcag | gaggaggcc   | cagggggggcc | cacagcccc   | 1740 |
| 33875      | aaagctgaga       | gtggtcgaag   | cggaggtgg  | ggactcatgg  | aagagatgaa  | cgccatgctg  | 1800 |
| 33877      | gcccggaggt       | gaggcctgagc  | ctggaccccc | aagtccatct  | gatcccagt   | tcagtagggc  | 1860 |
| 33879      | ccagtcagag       | gaggcgtcca   | attcctgttt | agtttgcgtt  | ttttgtgaa   | tgttccccct  | 1920 |
| 33881      | ttgataacca       | ggttggat     | ataatggtgg | ggttgcgt    | gaaatgcctg  | aggctgcaa   | 1980 |
| 33883      | ccaccttaggt      | agcctgtaga   | tgttctaaaa | cccagaattc  | tagaaccgta  | ggagatctt   | 2040 |
| 33885      | cctcagaatt       | ctgggaactc   | aggctcgtc  | aatctcagtg  | ttccaacaca  | gcaccgctcc  | 2100 |

NOS.  
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|-------|-------------|-------------|------------|------------|-------------|-------------|------|
| 33887 | accctcgaa   | tcttactgtt  | ccctaata   | agaatcatag | aacctcc     | accctgattc  | 2160 |
| 33889 | tagaaccaca  | atctctgaa   | ttttttttt  | ttttttttt  | tttttttga   | gatggagtct  | 2220 |
| 33891 | tgctctgtca  | cccaggctgg  | agtgcagtgg | tatgatctcg | gtccactgca  | acctccgcct  | 2280 |
| 33893 | cctgggttca  | ggcagttctt  | ctgcctcagc | ctcctaagta | gccgggatta  | caggcatgag  | 2340 |
| 33895 | tcaccacacc  | cggctaattt  | ttgtattttt | agtagacaca | ggatttcacc  | atgttggcca  | 2400 |
| 33897 | ggctggtctt  | gaactcttga  | cctcaagaga | tccacgtct  | tcagcctctc  | aaagtgttgg  | 2460 |
| 33899 | cattacaggc  | cactgcgcc   | agcacaatct | cttgaatttc | taaaactaga  | gtttccttag  | 2520 |
| 33901 | gttttggag   | ttccagaatt  | ctatgcgcta | ggatctacat | ttctagaact  | cccctcagaa  | 2580 |
| 33903 | ggggatgggt  | tgggtgacgg  | aagcacgtgt | tttgctttt  | ctctcctgca  | gaaggaaagc  | 2640 |
| 33905 | cacgcagtt   | ggggagaaaa  | cccccaagga | tgaatctgcc | aatgtaaagtc | agggacttt   | 2700 |
| 33907 | cttgccttac  | atctcttagg  | ccgtaccatg | agggtaggga | tatgtggatg  | tgtggggtt   | 2760 |
| 33909 | gaacctgaaa  | gagggaaatgg | gcagaggtgt | ggcaggggct | ggctcatggc  | agttttattt  | 2820 |
| 33911 | cctaccagca  | ggaggagcc   | gaggccagag | tcccgccca  | gagtggtgag  | tagagtgcc   | 2880 |
| 33913 | agtccagcca  | caggaactac  | aaatcccaga | atactctgtt | ctcacatgtt  | aagcaccctt  | 2940 |
| 33915 | ataggagagt  | cagggcgaat  | ggtgcgtggg | attgtagtc  | cctgagatgg  | ggctttgatc  | 3000 |
| 33917 | aggggctgat  | gaggttgggg  | gagtaagatt | gattgggggg | cagtctttt   | tccctgatct  | 3060 |
| 33919 | ttctgatttc  | ttgcctatcc  | ccagaatctg | tgcggagacc | ctgggagaag  | aacagcaca   | 3120 |
| 33921 | ccttgccaag  | gtaggccatc  | ggtcctgggg | cccttgggg  | gttaaaggcg  | ggcagatcgc  | 3180 |
| 33923 | ttgagccag   | gaggtcaaga  | ccagcctggg | caacatggcg | acaccccatc  | tctacaaaaa  | 3240 |
| 33925 | ttagccaggc  | gtggtagcac  | ttacctgtgg | tcccagctac | tcaggaggct  | gaggtgggag  | 3300 |
| 33927 | gattacttga  | gcccaggaag  | ttgaggcctc | agcgagccat | catcatgcct  | gcactccagc  | 3360 |
| 33929 | ctgagaaata  | gaatgtgact  | gtctaaaaac | aaaacacaac | aaacaaaaac  | caaaaaaaaaa | 3420 |
| 33931 | aaaaactggg  | gccccaaaaa  | tacttggact | tgcccaattt | ataaggcaga  | gctcaatgtg  | 3480 |
| 33933 | atccctggaa  | taggaggcgg  | ggaagcaggt | cctctctcta | atctcattgc  | tgtcccaa    | 3540 |
| 33935 | cacaccaact  | cccccaggat  | gaagtctgtc | tcttcgtga  | ccactccga   | gacccaaccc  | 3600 |
| 33937 | tgcacgcca   | gctccagtga  | ttactcggac | ctacagaggg | tgaaacaggt  | aacttgggg   | 3660 |
| 33939 | ggaagttggg  | gaccacagca  | agagagatct | aggctcgcc  | cctgccactg  | gcatgccgta  | 3720 |
| 33941 | tgatcctaga  | taacatctca  | gaaacctcg  | gtttccaatc | tgacaaaatgg | agaaaactgga | 3780 |
| 33943 | ttgggtcaag  | gatgaccgag  | actccacacc | ccctttctg  | gcacctgtga  | cagacattat  | 3840 |
| 33945 | taatctatca  | ccgcgcctat  | tccagatgag | tgcctgaat  | tcttcggca   | cattgacc    | 3900 |
| 33947 | gctgtccatc  | accaatttgg  | gttggcagga | ggcttggatg | cgcttgc     | ccttggta    | 3960 |
| 33949 | ggatgttctc  | cagtactttt  | ccggctccaa | ggatccagaa | ttctccccta  | gaatcctca   | 4020 |
| 33951 | gtcaactctgc | gaccttgaca  | gcatgtc    | ggtgtcgatg | tagggtagg   | tctcaa      | 4080 |
| 33953 | actccccc    | gctttccat   | caacaagaaa | gaggggactc | tggcagg     | cggtggctc   | 4140 |
| 33955 | tgtgtgtat   | ttcagcacat  | tgcgaggct  | agggtggagc | attgtttgag  | gccaggagtt  | 4200 |
| 33957 | tgagaccagc  | ctggggcaac  | atcgggagac | ccccatctc  | aaaaataact  | tttaaaagtt  | 4260 |
| 33959 | acctgagaag  | gccaggtgc   | gtggctcat  | cctgtatcc  | cagcacttt   | ggaggccgag  | 4320 |
| 33961 | gtgggtggat  | cacctgaggt  | caggggtca  | agaccgc    | ggccaacatg  | gtaaaaccca  | 4380 |
| 33963 | tgcctactaa  | aaatacaaaa  | attaggtgg  | gaatggtgg  | tcacagccat  | aatcccagca  | 4440 |
| 33965 | gtttggaaagg | ctgatgggg   | cgatcacgt  | gaagtcaaaa | gttcgagacc  | gcctggca    | 4500 |
| 33967 | acatggcgaa  | accctgtctc  | tactaaaaat | acaaaaatta | gctggcc     | gtgggggca   | 4560 |
| 33969 | cctgtatcc   | agtattttgg  | gcccgtgagg | caggagaatc | gcttga      | gggagccaga  | 4620 |
| 33971 | gattgcagtc  | agccgagatt  | ggccactgc  | actgcagtct | gggtgacagg  | gagactctgt  | 4680 |
| 33973 | ttcaaaaaaa  | aaaagaaaaa  | aaaaaagtt  | cctgattgt  | gcggcaggtg  | actgtggtcc  | 4740 |
| 33975 | cagctactt   | ggaggctaa   | gcaggaggat | tacctgagcc | tggaaagtt   | aggctgcaat  | 4800 |
| 33977 | gagctgtgat  | catgccattt  | caccctagcc | taggaacag  | agcaagg     | tttctcaaaa  | 4860 |
| 33979 | aataaaagaa  | gggggattca  | ttcctgcaag | tcccggtacc | cctcctgatt  | agttttaccc  | 4920 |
| 33981 | cattaatttt  | aggagcttct  | ggaagagg   | aaaaggaat  | tgcagaa     | gaaagagggaa | 4980 |
| 33983 | atcattgaag  | gtgaggtgg   | ttgcttgg   | ttgttctta  | aacatttact  | tat         | 5040 |

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| 33987      | gacctctgct       | ccttgttcc    | ttccagcctt  | cgtccaggag  | ctgaggaagc | ggggttctcc | 5160 |
| 33989      | ctgaccacag       | ggaccaggaa   | gaccgc      | tccttccgc   | acacccggcc | tgtcaccctg | 5220 |
| 33991      | ctttccctgc       | ctctacttga   | cttggaaattt | gctgaagact  | acacaggaat | gcatcg     | 5280 |
| 33993      | caactccat        | cccaacttgg   | aaactccaag  | gggggtgtggc | ttccctgctc | acacccacac | 5340 |
| 33995      | tggctgtga        | ttggctgggg   | aggccccgc   | cctttctcc   | cttggc     | tcccctctgc | 5400 |
| 33997      | catcccttgc       | ggcccg       | ctctgtgg    | gatgcaccaa  | tgaacccac  | aggaaggggg | 5460 |
| 33999      | aaggaaggag       | ggaatttac    | atcccttgc   | tctagattca  | ctttaacgct | taatgc     | 5520 |
| 34001      | aaagtttgg        | ttttttaag    | aaaaaaaaat  | atatatat    | ttgggtttt  | ggggaaaagg | 5580 |
| 34003      | gaaattttt        | tttctcttgc   | gtttgataa   | aatgggatgt  | gggagtttt  | aatgctata  | 5640 |
| 34005      | gccc             | tgcccattt    | ggggcagcta  | ttaagg      | ggggatgtct | caccgg     | 5700 |
| 34007      | gggg             | gagac        | atccccccac  | cccaggact   | ccc        | ctggc      | 5760 |
| 34009      | atgaggaat        | aagatgtgt    | aacttttgg   | aac         | tttgattt   | ttat       | 5820 |
| 34011      | agttttgg         | gtccaggca    | tttttttac   | cccttggagg  | aaataagat  | agggagaaag | 5880 |
| 34013      | gaaaagggg        | gaaaacttct   | ccc         | cttac       | agcttcttgc | aaatgg     | 5940 |
| 34015      | ctgcagaata       | aatctgccag   | ttttataaa   | tgc         | tctgg      | tttgaagg   | 6000 |
| 34017      | tgttctgtat       | gggatggagg   | tgt         | gtc         | ccc        | cc         | 6060 |
| 34019      | tctgtgaga        | accctgc      | cctccc      | atcc        | cac        | c          | 6120 |
| 34021      | ctgcatttgc       | cgc          | ctcatc      | ggcc        | cg         | aggatg     | 6180 |
| E--> 34022 | tccccc           | ccttggagg    | ccactt      | ccatccc     | cctgc      | 6240 6230  |      |
| E--> 34024 | accacc           | gggaggccag   | aagc        | actt        | ttgt       | gccttggca  | 6300 |
| E--> 34026 | tttac            | ccat         | ggc         | tca         | tttgg      | aaagg      | 6360 |
| E--> 34028 | actt             | accac        | tctcc       | actt        | ttttt      | ttttt      | 6420 |
| E--> 34030 | gggt             | tgt          | ctt         | caccc       | gtctgg     | aggat      | 6480 |
| E--> 34032 | tgaact           | cctg         | gg          |             |            |            | 6492 |
| 54644      | <210> SEQ ID NO: | 647          |             |             |            |            |      |
| 54645      | <211> LENGTH:    | 7586         | 7576        |             |            |            |      |
| 54646      | <212> TYPE:      | DNA          |             |             |            |            |      |
| 54647      | <213> ORGANISM:  | Homo sapiens |             |             |            |            |      |
| 54649      | <400> SEQUENCE:  | 647          |             |             |            |            |      |
| 54650      | gttctt           | gtt          | acacatcaca  | cagaattt    | gtgtgt     | cttggag    | 60   |
| 54652      | caagata          | acag         | ttcagaacca  | aaggaataga  | gaagg      | gtt        | 120  |
| 54654      | ttgggg           | attt         | gggaggctt   | gcaggaa     | tgtcc      | aaatgt     | 180  |
| 54656      | gtaac            | ttgg         | ggagagag    | agagcc      | actt       | cctc       | 240  |
| 54658      | tgttta           | acca         | cagt        | ttt         | cttct      | ctgc       | 300  |
| 54660      | tctt             | ggg          | ggaggat     | agcc        | cctc       | cac        | 360  |
| 54662      | tgc              | ggcc         | gtt         | ggc         | atcc       | atcg       | 420  |
| 54664      | aagaaa           | agt          | ggaac       | agggt       | tttgc      | ccatgt     | 480  |
| 54666      | ttc              | at           | tat         | tgag        | tttgc      | atccat     | 540  |
| 54668      | agg              | ttt          | c           | tgc         | at         | tttgc      | 600  |
| 54670      | tatt             | gaa          | acc         | tgc         | at         | tttgc      | 660  |
| 54672      | aaacca           | aaa          | atcc        | acac        | tttgc      | atcc       | 720  |
| 54674      | gtaggat          | ttt          | tacca       | acc         | tgc        | atcc       | 780  |
| 54676      | cctcc            | at           | aat         | gac         | tttgc      | atcc       | 840  |
| 54678      | tgaaaa           | aaat         | gccac       | gtt         | tttgc      | atcc       | 900  |
| 54680      | tggata           | acttcc       | ttt         | catt        | tttgc      | atcc       | 960  |
| 54682      | ctga             | acttcc       | tgt         | cccaca      | tttgc      | atcc       | 1020 |
| 54684      | agtc             | catt         | tgt         | tttgc       | tttgc      | atcc       | 1080 |
| 54686      | acatt            | gctt         | taa         | aggcaaaa    | tttgc      | atcc       | 1140 |

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| 54690      | agagtcttcc  | atcctctgac | aaaagaaaaga | atatgtactc  | aggtggagag  | aatgttcaga | 1260      |
| 54692      | tgaatgggg   | tacgccccat | gatggaggc   | acggaggagg  | aggacatgg   | gattgtgaag | 1320      |
| 54694      | aattgcacgc  | aactggacgg | ttctgtgg    | gactaattaa  | agacataaaag | aggaaagcgc | 1380      |
| 54696      | catttttgc   | cagtatttt  | tatgatgctt  | taaatattca  | agctcttcg   | gcaattctct | 1440      |
| 54698      | tcatttatct  | ggcaactgta | actaatgta   | tcactttgg   | aggactgctt  | ggggatgcca | 1500      |
| 54700      | ctgacaacat  | gcagggcgtg | ttggagagtt  | tcctggcac   | tgctgtctct  | ggagccatct | 1560      |
| 54702      | tttgccttt   | tgctggtaa  | ccactcacta  | ttctgagca   | caccggac    | gtcctagtt  | 1620      |
| 54704      | ttgagaggct  | tctatTTAAT | ttcagcaagg  | acaataattt  | tgactattt   | gagtttcg   | 1680      |
| 54706      | tttggattgg  | cctgtggcc  | gccttcctat  | gtctcatttt  | ggtagccact  | gtgccagct  | 1740      |
| 54708      | tcttggttca  | ataattcaca | cgttcacgg   | aggaggc     | ttcctctct   | attagcttca | 1800      |
| 54710      | tcttatctt   | tgatgcttc  | aagaagatga  | tcaagcttgc  | agattactac  | cccatcaact | 1860      |
| 54712      | ccaaacttcaa | agtgggctac | aacactctt   | tttcctgtac  | ctgtgtgcca  | cctgacc    | 1920      |
| 54714      | ctaataatctc | aatatcta   | gacaccacac  | tggccccaga  | gtatttgcca  | actatgtt   | 1980      |
| 54716      | ctactgacat  | gtaccataat | actaccc     | actggcatt   | tttgcgaag   | aaggagtgtt | 2040      |
| 54718      | caaaatacgg  | aggaaacctt | gtcgggaca   | actgttaattt | tgttctgtat  | atcacactca | 2100      |
| 54720      | tgtctttat   | ccttttctt  | ggaac       | cctcttccat  | ggctctgaaa  | aaattcaaaa | 2160      |
| 54722      | ctagtcctt   | tttccaacc  | acagcaagaa  | aactgatcag  | tgatttgcc   | attatctt   | 2220      |
| E--> 54723 | cttttgtt    | ata        | gatgccc     | tagggcgt    | ggacacccca  | aaactaattt | 2280 2270 |
| E--> 54725 | tgccaa      | gttcaagcc  | acaag       | tttccaa     | accgagg     | tttgc      | 2340      |
| E--> 54727 | aaaaccc     | ctg        | gtgggtgt    | cttgc       | ctatccc     | ggc        | 2400      |
| E--> 54729 | tttcatgg    | ccaacaa    | att         | acagctgt    | ttgtaa      | acag       | 2460      |
| E--> 54731 | aaggagcagg  | gtatca     | cttgc       | tttt        | gggtggccat  | cctcatgg   | 2520      |
| E--> 54733 | tcatgg      | cttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 2580      |
| E--> 54735 | tgaagatg    | gacag      | act         | tc          | tc          | tc         | 2640      |
| E--> 54737 | aacaaagagt  | cactg      | gaa         | tttgc       | tttgc       | tttgc      | 2700      |
| E--> 54739 | ccatctt     | gat        | tttata      | tttgc       | tttgc       | tttgc      | 2760      |
| E--> 54741 | catcc       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 2820      |
| E--> 54743 | atcag       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 2880      |
| E--> 54745 | tcctgc      | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 2940      |
| E--> 54747 | ttttcc      | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3000      |
| E--> 54749 | cccag       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3060      |
| E--> 54751 | aggatg      | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3120      |
| E--> 54753 | actgccc     | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3180      |
| E--> 54755 | aac         | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3240      |
| E--> 54757 | gccac       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3300      |
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| E--> 54763 | acattt      | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3480      |
| E--> 54765 | ttcgt       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3540      |
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| E--> 54769 | tttgc       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3660      |
| E--> 54771 | gacac       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3720      |
| E--> 54773 | tgt         | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3780      |
| E--> 54775 | actgg       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 3840      |
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| E--> 54781 | accatt      | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 4020      |
| E--> 54783 | taacc       | tttgc      | tttgc       | tttgc       | tttgc       | tttgc      | 4080      |

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 E--> 54795 tggcttatga aggagattga gggagaagag acaaactccat atgtcatgag aataaccat 4440  
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 E--> 54821 tactagaagc agaatgaaac cacattttt ggttgcataa tatgcactta ttgactccca 5220  
 E--> 54823 ctcattgtt aatgttattaa gttattttc tgcatttttgc taattttgtat tacaaaaaatt 5280  
 E--> 54825 ttattatctt gagtttagctg ttacttttac agtacctgtat actccataaa ctttttaactt 5340  
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 E--> 54879 gtatTTTTTtgc ttcattgttgc aacccatatac gatgtttttt tttatcaact atataactgtt 6960  
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|            |                                  |  |         |
|------------|----------------------------------|--|---------|
| E--> 54883 | ttttggccag agatttagat atgtccaatt | tcctggctca tttcattgtg ctctatgggt               | 7080    |
| E--> 54885 | acgtataaaa agcaagaatt            | ctgtttccta ggcaaacatt gcaactcagg gctaaagtca    | 7140    |
| E--> 54887 | tccagtgaaa ctttttagagc           | cagaagtaac tttgtcccag tcctacaatg taaaaagagt    | 7200    |
| E--> 54889 | gaatagttgc ctcttttag             | ccatttcat ggctggtaca tattogtacg cattacttt      | 7260    |
| E--> 54891 | cagaatcaat acgcacttgc            | agatattctt attttatttc tcctaagtct ttattaactt    | 7320    |
| E--> 54893 | tggagagaga aatgatgcat            | cttttattt taaatgaagt agatcaacat ggtggaaacaa    | 7380    |
| E--> 54895 | aatgataaaag aacagaaaac           | atttcaatat attactaata acttttcca atataaaatcc    | 7440    |
| E--> 54897 | taaaattcct ataaacatagt           | attttacagt tttatgaagc tttctattgt gactttatg     | 7500    |
| E--> 54899 | gaattaagag atgaagaaga            | ttagatattt tagcattat attttcaaa attatatgt       | 7560    |
| E--> 54901 | tactaaaaaa taaagtaact            | ttatgc   | 7586    |
| 63314      | <210> SEQ ID NO: 790             |  |         |
| 63315      | <211> LENGTH: (3327) 3319        |  |         |
| 63316      | <212> TYPE: DNA                  |  |         |
| 63317      | <213> ORGANISM: Homo sapiens     |  |         |
| 63319      | <400> SEQUENCE: 790              |  |         |
| 63320      | cacacccccc caaggacccc            | caaactctgc tcctgtcaacg tcaaattgtc ctttcccttg   | 60      |
| 63322      | tgtccaaaccc cctacccttc           | tccctaacac cccttctc aacaagactc agcctctccc      | 120     |
| 63324      | cgaggtgggt gagcatcctt            | gaggttccc acccttaact gctgtgtccc cggatggagc     | 180     |
| 63326      | cagagaaatg tgggggggg             | gccggggcag agtttcaaca ttgcocccca gaaggaggag    | 240     |
| 63328      | ccagagatgg ggtctgtcca            | ggaaaacagg atgcccggagc ccaggagtgc tcagcctagc   | 300     |
| 63330      | agttgcctgg cctccagatg            | cctcccaggg gaggcagatcc tagcatggc cccaggggtg    | 360     |
| 63332      | aggaaggccc tggaccaga             | attgtctgga accctgtatc gtaccaactt tagggtcacc    | 420     |
| 63334      | ttccagccct gtggatggca            | gtggaatcag gacactccct tgaacagtga atacgatttt    | 480     |
| 63336      | gcccgttca acattggacg             | attagaggct gtgagcgggt tgcggcgggt ccagctcc      | 540     |
| E--> 63337 | ccctgcataa atttatccct            | gaggagattc tgattcatgg ccgagacttc               | 600 590 |
| E--> 63339 | cggctgtca gagttgggtt             | tgaggctgga ggcctagagc ctcaggctt tcaggtgacc     | 660     |
| E--> 63341 | atggccattg tccaagccag            | agctcagagc aatcaagccc aacagtattc gggataacc     | 720     |
| E--> 63343 | ctgagcaagg ctggccaggg            | ttctggctcc agaaaaccac caattccctt catggagaca    | 780     |
| E--> 63345 | gcggaagact gggagactga            | gcggaagaag caggcagcc gaggotggag gtcagcacg      | 840     |
| E--> 63347 | gtcaacgaga ggttgcacgt            | agccaccagg ctccccgtt acttctgggt ccctaacoga     | 900     |
| E--> 63349 | attctggaca gtgaggtcag            | gagagcattt ggccactttc atcaggccg tggaccggc      | 960     |
| E--> 63351 | agtgtatgg ttagggtaat             | ggctgtggat tagagggtaa tggggccag ggacatcg       | 1020    |
| E--> 63353 | gagggaggaa cctctgtgag            | gtcagttgtgg gggcaagggt agcgtggagc taggcatttc   | 1080    |
| E--> 63355 | tcccacaatg acccttttct            | gccccatgtg aagcgcttgc cctggcatca ccctggggc     | 1140    |
| E--> 63357 | agtgtatccc tccgtgtgg             | aggcttctat acagccagtg accctaaacaa ggaggatatc   | 1200    |
| E--> 63359 | agagcagtgg agttgtatc             | ccaggctggg cattcagatg ttgtctgtt agacactatg     | 1260    |
| E--> 63361 | gatgagctgc ccagccttgc            | agatgtccaa cttggccacc tgaggctgag gcccctctgc    | 1320    |
| E--> 63363 | ctgcctgatt catctgttagc           | tgaggataaa tgctttcagc cctggaaagga acacgtggc    | 1380    |
| E--> 63365 | tggactatgt cagggcttgc            | ttcgaaaagg coagtgcacat ttcatgttata gtgacatcca  | 1440    |
| E--> 63367 | gggttcgttc tgtaataactt           | caaggctccg gtgtttctcc tcttcattga ttgtgtctgg    | 1500    |
| E--> 63369 | cagtcctcc agcagttcc              | agctgatattt gatattctctg agttttctt tcttgctt     | 1560    |
| E--> 63371 | catgacagtgc tcaagggttcc          | tgacaccctt accttcctga gaaataaccc ctgggagcgc    | 1620    |
| E--> 63373 | ggaaagcaga gggacaggt             | cagtgcattc tatttttgc tcgtgtttt tttccattt       | 1680    |
| E--> 63375 | agatgtactc tctgaagttt            | ggtcttgatt tttttatga gaagtggaggt ctgtgagtg     | 1740    |
| E--> 63377 | ggagggggag atttatttctc           | attttaogga cgagactttt gcccatac tttccatgaa      | 1800    |
| E--> 63379 | taagaggtga gaatctcatg            | atttgcattc agatgtggga ggattgtgtg taaccatct     | 1860    |
| E--> 63381 | ttttcttgc tcctctgtcc             | agttaaactc ctatacacaatc gtctacaccc caggataactc | 1920    |
| E--> 63383 | cagcctccag ctgggaaactc           | ttttaacctg cagctgtctg tctggactg ggatttaagt     | 1980    |
| E--> 63385 | tatagcaatg cacagactact           | acaattccag aatcctggat atgacccaga acactgttca    | 2040    |

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/873,367B

DATE: 03/05/2003

TIME: 12:07:54

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03052003\I873367B.raw

E--> 63387 gattcctggc tccttagacc acagccaagg ttcatggttc ctggacccccc cagttttgtg 2100  
 E--> 63389 tggctttctt ctagaggagc attgacccccc ctgaatcagc tctgtccttgc gcgggacagt 2160  
 E--> 63391 cttccctgc tggcagtctc ttctcggttgg ctccctcgac ctgttatctc ctctgaaagc 2220  
 E--> 63393 tggctgacca ggaatggggc ctccctcac attggggagc ttgcccttta cctccaggc 2280  
 E--> 63395 tgctgctgcc tgggtatctg ggacccaga tcaggctctg gagacgctgc tacctgaggg 2340  
 E--> 63397 gaaggcctga ggtccaggta agaaggaaa atagactggg agtgggacaa gggacttgac 2400  
 E--> 63399 tctgctgaac cagatgaaca ggagctggaa aggcaaggag ctgaagcctc tgggagtctg 2460  
 E--> 63401 ggaagtgaag ttctactcctt cttggcatca aacaagggtt gggagtgtag gaggtgcggg 2520  
 E--> 63403 aaagtgcctt tggcttagat taagtggaaat ttagggcata gctgaaaggg gaaacagaat 2580  
 E--> 63405 taaagacacc agaagtagca gagaagcagg gggccagagc tacaacagta ttcttcctc 2640  
 E--> 63407 ttccctcttgc cttccccc agatggcct ctcatctccc acaatctctg gcctccagga 2700  
 E--> 63409 tgagctatcc catcttcagg agttattacg gaaaggacac caagaataatc tcctgaggat 2760  
 E--> 63411 cactccaaga aaagagatcc acataccatt ctcataatccc ctgaaattgc tggcatttcc 2820  
 E--> 63413 aaaggcaggg cagagggggta tctgggttag agggagggtt ctgtctaattc ttttttttt 2880  
 E--> 63415 cttttgtatc tgcaatttgcgc gcctcagctt tcatacttca gcccttaagt tcactaagaa 2940  
 E--> 63417 ggtctgagtt tctgtcgtcag atagttgtgt taactgtctcc aactcttgc ttgcttagtt 3000  
 E--> 63419 tctacaaaata tttttgttcc ttgtcatttgc aaggattaag aaacaaaaac aatccagaaa 3060  
 E--> 63421 ttgatcggtt ttttttaggccc aatccatcc cttctggata accagatgtt aatcatgag 3120  
 E--> 63423 atcagagatg ctgttcatca gtcccaacaa gatggcctag aaatcgcatt ctcacctcgc 3180  
 E--> 63425 cttgctgctg ctttaattcc aagttctatt tcttcccttta tagtttcta tgggaatgag 3240  
 E--> 63427 gcggatcacag gaaacaccct atctcctctg tattttgttgc tggaaatttc tatttaaggg 3300  
 E--> 63429 gtcattaaa gcatagttattatac 3327

64203 &lt;210&gt; SEQ ID NO: 810

64204 &lt;211&gt; LENGTH: 2602 2592

64205 &lt;212&gt; TYPE: DNA

64206 &lt;213&gt; ORGANISM: Homo sapiens

64208 &lt;400&gt; SEQUENCE: 810

64209 gccgtgtcgc caccatggct ccgcacccgc cccgcggccgc gctgtttgc gcgtgtccc 60  
 64211 tggcgctgtc cgcgcgtcgtc ctggccgtcc gcgcggccac tgcgtcgccgg ggggcgtccc 120  
 E--> 64212 gccccaggggg cgggtgcccgg agggcggggcc caacagcatg gtgggtggaaac 180 170  
 E--> 64214 acccccgagtt cctcaaggca gggaggagc ctggcctgca gatctggcgt gtggagaagt 240  
 E--> 64216 tcgatctggt gccccgtgccc accaaccctt atggagactt cttcacgggc gacgcctacg 300  
 E--> 64218 tcatacctgaa gacagtgcag ctgaggaacg gaaatctgca gtatgacctc cactactggc 360  
 E--> 64220 tgggcaatga gtgcagccag gatgagagcg gggcgccgc catcttacc gtgcagctgg 420  
 E--> 64222 atgactacccatc gaaacggccgg gccgtgcagc accgtgaggt ccaggcttc gatgcggccca 480  
 E--> 64224 cttccctagg ctacttcaag tctggcctga agtacaagaaa aggaggtgtg gcatcaggat 540  
 E--> 64226 tcaagcacgt ggtacccaaac gaggtgggtgg tgcagagact cttccaggc aaaggccggc 600  
 E--> 64228 gtgtggcccg tggccaccggag gtacctgtgt cttggggagag cttcaacaat ggcgactgt 660  
 E--> 64230 tcatacctgaa cctggcaac aacatccacc agtgggtgtgg ttccaaacagc aatcggtatg 720  
 E--> 64232 aaagactgaa gcccacacag gtgtccaagg gcatccggga caacgagcgg agtggccggg 780  
 E--> 64234 cccgagtgca cgtgtctgag gaggcactg agcccgaggc gatgtccag gtgtggggcc 840  
 E--> 64236 ccaagccggc tctgcctgca ggtaccggagg acaccggccaa ggaggatgcg gccaaccgca 900  
 E--> 64238 agctggccaa gctctacaag gtctccaatg gtgcaggagc catgtccgtc tccctcggt 960  
 E--> 64240 ctgatgagaa ccccttcggcc cagggggccc tgaagtcaga ggactgcttc atcctggacc 1020  
 E--> 64242 acggcaaaaga tggaaaatc tttgtctggaa aaggcaagca ggcaaacacg gaggagagga 1080  
 E--> 64244 aggctgcctt caaaacagcc tctgacttca tcaccaagat ggactacccc aagcagactc 1140  
 E--> 64246 aggtctcggt cttccctgag ggcgggtgaga ccccaactgtt caagcagtcc ttcaagaact 1200  
 E--> 64248 ggcgggaccc agaccagaca gatggcctgg gcttgcctca cctttccagc catatcgcca 1260  
 E--> 64250 acgtggagcg ggtgccttc gacgcccggca ccctgcacac ctccactgccc atggccggccc 1320

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off

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/873,367B

DATE: 03/05/2003

TIME: 12:07:54

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03052003\I873367B.raw

|            |   |      |
|------------|---|------|
| E--> 64252 | agcacggcat ggatgacgat ggcacaggcc agaaaacagat ctggagaatc gaaggatcca  | 1380 |
| E--> 64254 | acaagggtgcc cgtggaccct gccacatatg gacagttcta tggagggcgc agctacatca  | 1440 |
| E--> 64256 | ttctgtacaa ctacccgcat ggtggccgccc aggggcagat aatctataac tggcagggtg  | 1500 |
| E--> 64258 | cccagtctac ccaggatgag gtcgctgcat ctgcacatcc gactgctcag ctggatgagg   | 1560 |
| E--> 64260 | agctgggagg taccctgtc cagagccgtg tggtccaagg caaggagccc gcccacctca    | 1620 |
| E--> 64262 | tgagcctgtt tgggtggaaag cccatgatca tctacaaggg cggcacctcc cgcgaggcgc  | 1680 |
| E--> 64264 | ggcagacagc ccctgccagc acccgctct tccaggtccg cgccaaacagc gctggagcca   | 1740 |
| E--> 64266 | cccggtgt tgaggatttg cctaaggctg gtgcactgaa ctccaaacgat gcctttgttc    | 1800 |
| E--> 64268 | tgaaaacccc ctcagccgccc tacctgtggg tgggtacagg agccagcgag gcagagaaga  | 1860 |
| E--> 64270 | cggggccca ggagctgctc aggggtctgc gggcccaacc tgcgcagggtg gcagaaggca   | 1920 |
| E--> 64272 | gcgagccaga tggcttctgg gaggccctgg ggggaaggc tgcctaccgc acatccccac    | 1980 |
| E--> 64274 | ggctgaagga caagaagatg gatgcacccatc ctgcctgcct cttgcctgc tccaaacaaga | 2040 |
| E--> 64276 | ttggacgttt tgcgtatcgaa gaggttcctg gtgcgcgtcat gcaggaagac ctggcaacgg | 2100 |
| E--> 64278 | atgacgtcat gcttctggac acctgggacc aggtctttgt ctgggttggaa aaggatttcc  | 2160 |
| E--> 64280 | aagaagaaga aaagacagaa gccttgactt ctgcataagcg gtacatcgag acggacccag  | 2220 |
| E--> 64282 | ccaatcgga tcggcgacg cccatcaccc tggtaagca aggctttag cctccctct        | 2280 |
| E--> 64284 | ttgtggctg gttccttggc tggatgtatg attactggc tgcgcacccc ttggacagg      | 2340 |
| E--> 64286 | ccatggctga gctggctgccc tgaggagggg caggcccac ccatgtcacc ggtcagtgc    | 2400 |
| E--> 64288 | ttttggaaact gtccttccct caaagaggcc ttagagcgag cagacgact ctgcatacg    | 2460 |
| E--> 64290 | tgtgtgtgtg tgtgtgtgtt gtttctttttttt cagtatccaa aatagccct            | 2520 |
| E--> 64292 | gcaaaaattc agatccctt caaaattgtc taaaatgtca gtgtttggaa aattaaatcc    | 2580 |
| E--> 64294 | aataaaaaaca ttttgaagtg tg   | 2602 |

70729 &lt;210&gt; SEQ ID NO: 967

70730 &lt;211&gt; LENGTH: 271

70731 &lt;212&gt; TYPE: DNA

70732 &lt;213&gt; ORGANISM: Homo sapiens

70734 &lt;220&gt; FEATURE:

70735 &lt;221&gt; NAME/KEY: misc\_feature

70736 &lt;222&gt; LOCATION: (1)...(271)

70737 &lt;223&gt; OTHER INFORMATION: n=a,t,g or c

E--&gt; 70740 &lt;400&gt; SEQUENCE: 967

70741 gateggtttc gccatcatga cgcagttct cccagttggcc ctgttctccc tggggcctt 60

W- 70742 caccaggatg accatntggg ccaaggccaa gcacccgac tacctgaagg agttccggga 120

70743 ctacccgccc ctgcgcattgc ccatnatncc cttcctgctc tgagcgtca cccctgctga 180

70744 ggctcagccc cttaaccggg tggcattctg ggggaggagt ggggcccaca gntctccagc 240

70745 acccggata aagcccgntc gccccagtcg g 271

*see p. 16  
for explanation  
of error*

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<210> 967  
<211> 271  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)...(271)  
<223> n=a,t,g or c

400> 967

<400>

↑  
Insert  
opening  
bracket

Use of n and/or Xaa has been detected in the Sequence Listing.  
Review the Sequence Listing to insure a corresponding  
explanation is presented in the <220> to <223> fields of  
each sequence using n or Xaa.

PNL Use of n and/or Xaa has been detected in the Sequence Listing.  
Review the Sequence Listing to insure a corresponding  
explanation is presented in the <220> to <223> fields of  
each sequence using n or Xaa.

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/873,367B

DATE: 03/05/2003  
TIME: 12:07:56

Input Set : N:\EBONY'S\EP.txt  
Output Set: N:\CRF4\03052003\I873367B.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 10

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/873,367B

DATE: 03/05/2003

TIME: 12:07:56

Input Set : N:\EBONY'S\EP.txt  
Output Set: N:\CRF4\03052003\I873367B.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No  
L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:49 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:180  
M:341 Repeated in SeqNo=1  
L:82 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:300  
M:341 Repeated in SeqNo=2  
L:105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:180  
M:341 Repeated in SeqNo=3  
L:166 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:300  
M:341 Repeated in SeqNo=6  
L:199 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:360  
M:341 Repeated in SeqNo=7  
L:234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:480  
M:341 Repeated in SeqNo=8  
L:255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:120  
M:341 Repeated in SeqNo=9  
L:342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:480  
M:341 Repeated in SeqNo=12  
L:542 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:540  
L:594 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:480  
L:830 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:120  
L:4327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:1440  
L:4826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90 after pos.:0  
M:341 Repeated in SeqNo=90  
L:5793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99 after pos.:300  
L:8017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:114 after pos.:1080  
M:341 Repeated in SeqNo=114  
L:8108 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115 after pos.:180  
L:8146 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117 after pos.:180  
L:8165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118 after pos.:0  
M:341 Repeated in SeqNo=118  
L:8190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119 after pos.:0  
M:341 Repeated in SeqNo=119  
L:8223 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:120 after pos.:180  
M:341 Repeated in SeqNo=120  
L:8261 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122 after pos.:0  
M:341 Repeated in SeqNo=122  
L:8307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124 after pos.:0  
M:341 Repeated in SeqNo=124  
L:8344 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125 after pos.:300  
M:341 Repeated in SeqNo=125  
L:8363 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:126 after pos.:60  
M:341 Repeated in SeqNo=126  
L:11260 M:254 E: No. of Bases conflict, LENGTH:Input:1440 Counted:1430 SEQ:159  
M:254 Repeated in SeqNo=159  
L:11296 M:252 E: No. of Seq. differs, <211> LENGTH:Input:2520 Found:2510 SEQ:159  
L:12744 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:175 after pos.:0  
L:12785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:176 after pos.:360

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/873,367B

DATE: 03/05/2003

TIME: 12:07:56

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03052003\I873367B.raw

L:12860 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:179 after pos.:360  
M:341 Repeated in SeqNo=179  
L:12883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:180 after pos.:180  
M:341 Repeated in SeqNo=180  
L:12922 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:181 after pos.:420  
M:341 Repeated in SeqNo=181  
L:12949 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:182 after pos.:240  
L:14893 M:254 E: No. of Bases conflict, LENGTH:Input:9180 Counted:9170 SEQ:230  
M:254 Repeated in SeqNo=230  
L:15081 M:252 E: No. of Seq. differs, <211> LENGTH:Input:14770 Found:14760 SEQ:230  
L:33234 M:254 E: No. of Bases conflict, LENGTH:Input:240 Counted:230 SEQ:313  
M:254 Repeated in SeqNo=313  
L:33260 M:252 E: No. of Seq. differs, <211> LENGTH:Input:1008 Found:998 SEQ:313  
L:34022 M:254 E: No. of Bases conflict, LENGTH:Input:6240 Counted:6230 SEQ:320  
M:254 Repeated in SeqNo=320  
L:34032 M:252 E: No. of Seq. differs, <211> LENGTH:Input:6492 Found:6482 SEQ:320  
L:54723 M:254 E: No. of Bases conflict, LENGTH:Input:2280 Counted:2270 SEQ:647  
M:254 Repeated in SeqNo=647  
L:54901 M:252 E: No. of Seq. differs, <211> LENGTH:Input:7586 Found:7576 SEQ:647  
L:63337 M:254 E: No. of Bases conflict, LENGTH:Input:600 Counted:590 SEQ:790  
M:254 Repeated in SeqNo=790  
L:63429 M:252 E: No. of Seq. differs, <211> LENGTH:Input:3327 Found:3317 SEQ:790  
L:64212 M:254 E: No. of Bases conflict, LENGTH:Input:180 Counted:170 SEQ:810  
M:254 Repeated in SeqNo=810  
L:64294 M:252 E: No. of Seq. differs, <211> LENGTH:Input:2602 Found:2592 SEQ:810  
L:70740 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:967 differs:966